AMENDMENTS TO THE CLAIMS – Marked Up Version

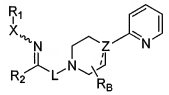
Claims 1, 3-39, 49-52, 55-62 and 70-96 are pending in the application.

Claims **1-11, 18-20, 32-38, 40-48, 53, 54** and **63-69** have been elected for prosecution. Claims 12-17, 21-31, 39, 49-52, 55-62 and 70-96 have been withdrawn as being drawn to non-elected inventions. Claims **2, 40-48, 53, 54**, and **63-69** have been cancelled.

Claims **5, 18, and 33** are **currently amended**. Claims **34, 35, 36** and **38** are **currently withdrawn**.

The following list of claims will replace prior versions and listing of claims in the application:

1. (Previously Presented) A compound of formula (I)



(I)

or a pharmaceutically acceptable salt thereof, wherein

X is selected from the group consisting of O and NR_A;

R_A is selected from the group consisting of hydrogen and alkyl;

R_1 is selected from the group consisting of hydrogen, alkenyl, alkoxyalkyl, alkyl, alkynyl, arylalkyl, cyanoalkyl, cycloalkyl, haloalkyl, and hydroxyalkyl;

R_2 is selected from the group consisting of aryl, arylalkyl, heteroaryl, and heteroarylalkyl; wherein the heteroaryl and the heteroaryl moiety of the heteroarylalkyl are monocyclic, five or six membered rings containing 1, 2, 3, or 4 heteroatoms independently selected from the group consisting of N, O, and S;

L is C_1-C_2 alkylene substituted with 0 or 1 substituent selected from the group consisting of alkoxy, alkoxyamino, hydroxy, and hydroxyiminoaryl;

R_B is hydrogen or alkyl;

Z is N; and

--- is absent

2. (Cancelled) The compound according to claim 1 wherein R_3 is

3. (Previously Presented) The compound according to claim 1 wherein X is O; and R_2 is aryl.

4. (Previously Presented) The compound according to claim 3 wherein R_2 is selected from the group consisting of naphthyl and phenyl wherein the phenyl is substituted with 0, 1, or 2 substituents independently selected from the group consisting of alkyl, cyano, and halogen.

5. (Currently Amended) The compound according to claim 1 selected from the group consisting of

(1E)-1-(3-chlorophenyl)-3-(4-pyridin-2-yl-piperazin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(3-chlorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1E)-1-(4-chlorophenyl)-3-(4-pyridin-2-yl-piperazin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(4-chlorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1E)-1-(4-fluorophenyl)-2-(4-pyridin-2-ylpiperazin-1-yl)ethanone O-methyloxime;

(1Z)-1-(4-fluorophenyl)-2-(4-pyridin-2-ylpiperazin-1-yl)ethanone O-methyloxime;

(1E)-1-(4-chlorophenyl)-2-(4-pyridin-2-ylpiperazin-1-yl)ethanone O-methyloxime;

(1Z)-1-(4-chlorophenyl)-2-(4-pyridin-2-ylpiperazin-1-yl)ethanone O-methyloxime;

(1E)-1-(3,4-dimethylphenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(3,4-dimethylphenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1E)-1-(3-chloro-4-fluorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(3-chloro-4-fluorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1E)-1-(3-methylphenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(3-methylphenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1E)-1-(4-fluorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(4-fluorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1E)-1-(3,4-dichlorophenyl)-2-(4-pyridin-2-ylpiperazin-1-yl)ethanone O-methyloxime;

(1Z)-1-(3,4-dichlorophenyl)-2-(4-pyridin-2-ylpiperazin-1-yl)ethanone O-methyloxime;

(1E)-1-(2-methylphenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-ethyloxime;

(1Z)-1-(2-methylphenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-ethyloxime;

(1E)-1-(2-methylphenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(2-methylphenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

3-[(1E)-N-methoxy-3-(4-pyridin-2-ylpiperazin-1-yl)propanimidoyl]benzonitrile

3-[(1Z)-N-methoxy-3-(4-pyridin-2-ylpiperazin-1-yl)propanimidoyl]benzonitrile

(1E)-1-(2,4-dichlorophenyl)-2-(4-pyridin-2-ylpiperazin-1-yl)ethanone O-methyloxime;

(1Z)-1-(2,4-dichlorophenyl)-2-(4-pyridin-2-ylpiperazin-1-yl)ethanone O-methyloxime;

(1E)-1-phenyl-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one oxime;

(1Z)-1-phenyl-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one oxime;

1-(4-fluorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one oxime;

(1E)-1-(4-chlorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one oxime;

(1E)-1-phenyl-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-ethyloxime;

(1Z)-1-phenyl-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-ethyloxime;

(1E)-1-phenyl-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-phenyl-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1E)-1-phenyl-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-propyloxime;

(1Z)-1-phenyl-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-propyloxime;

(1E)-1-phenyl-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-allyloxime;

(1Z)-1-phenyl-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-allyloxime;

(1E)-1-(3,5-difluorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(3,5-difluorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

({[1-phenyl-3-(4-pyridin-2-ylpiperazin-1-yl)propylidene]amino}oxy)acetonitrile;

1-phenyl-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-butyloxime;

(1E)-1-phenyl-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-isopropyloxime;

(1E)-1-(3,5-dimethylphenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(3,5-dimethylphenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1E)-1-(4-chloro-3-methylphenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(4-chloro-3-methylphenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1E)-1-(2-naphthyl)-2-(4-pyridin-2-ylpiperazin-1-yl)ethanone O-methyloxime;

(1Z)-1-(2-naphthyl)-2-(4-pyridin-2-ylpiperazin-1-yl)ethanone O-methyloxime;

(1E)-1-(3-methylphenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-ethyloxime;

(1Z)-1-(3-methylphenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-ethyloxime;

1-(4-fluorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-(2,2,2-trifluoroethyl)oxime;

1-(4-chlorophenyl)-3-(methoxyamino)-2-[(4-pyridin-2-ylpiperazin-1-yl)methyl]propan-1-one O-methyloxime;

(1E)-1-(3,4-dichlorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(3,4-dichlorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1E)-1-(2-chlorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(2-chlorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1E)-1-(2,4-dichlorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(2,4-dichlorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1E)-1-(4-bromophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(4-bromophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1E)-1-(3-fluorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(3-fluorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1E)-1-(4-fluorophenyl)-2-(4-pyridin-2-ylpiperazin-1-yl)ethanone oxime;

(1Z)-1-(4-fluorophenyl)-2-(4-pyridin-2-ylpiperazin-1-yl)ethanone oxime;

~~2-{4-[(3E)-3-(hydroxyimino)-3-phenylpropyl]piperazin-1-yl}nicotinonitrile~~;

(1E)-1-(4-fluorophenyl)-2-[(2S)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]ethanone O-methyloxime;

(1Z)-1-(4-fluorophenyl)-2-[(2S)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]ethanone O-methyloxime;

(1E)-1-(4-chlorophenyl)-3-[(2S)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]propan-1-one O-methyloxime;

(1Z)-1-(4-chlorophenyl)-3-[(2S)-2-methyl-4-pyridin-2-ylpiperazin-1-yl]propan-1-one O-methyloxime;

1-(4-chlorophenyl)-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-(2-hydroxyethyl)oxime;

(1E)-1-(4-chlorophenyl)-2-hydroxy-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(4-chlorophenyl)-2-hydroxy-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime;

(1E)-1-(4-chlorophenyl)-2-methoxy-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime; and

(1Z)-1-(4-chlorophenyl)-2-methoxy-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime.

6. (Previously Presented) The compound according to claim 1 wherein X is O; and R_2 is arylalkyl.

7. (Previously Presented) The compound according to claim 6 wherein R_2 is benzyl.

8. (Original) The compound according to claim 7 selected from the group consisting of

(2E)-1-phenyl-3-(4-pyridin-2-ylpiperazin-1-yl)acetone O-methyloxime; and

(2Z)-1-phenyl-3-(4-pyridin-2-ylpiperazin-1-yl)acetone O-methyloxime.

9. (Previously Presented) The compound according to claim 1 wherein

X is O; and R_2 is heteroaryl.

10. (Previously Presented) The compound according to claim 9 wherein

R_2 is pyridin-3-yl.

11. (Previously Presented) The compound according to claim 1 selected from the group consisting of

(1E)-1-pyridin-3-yl-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime; and

(1Z)-1-pyridin-3-yl-3-(4-pyridin-2-ylpiperazin-1-yl)propan-1-one O-methyloxime.

12. (Cancelled) The compound according to claim 2 wherein

X is O;

R_2 is aryl;

Z is C;

--- is a single bond; and

R_4 is heteroaryl.

13. (Cancelled) The compound according to claim 2 wherein

X is O;

R_2 is aryl wherein the aryl is selected from the group consisting of naphthyl and phenyl wherein the phenyl is substituted with 0, 1, or 2 substituents independently selected from the group consisting of alkyl, cyano, and halogen;

Z is C;

--- is a single bond; and

R_4 is heteroaryl wherein the heteroaryl is selected from the group consisting of pyrazin-2-yl, 3-cyanopyridin-2-yl, 5-hydroxypyridin-2-yl, 3-methylpyridin-2-yl, pyridin-2-yl, 2-pyridinium N-oxide, pyrimidin-2-yl, and thiazol-2-yl.

14. (Cancelled) The compound according to claim 13 selected from the group consisting of

1-(4-fluorophenyl)-3-[4-(1,3-thiazol-2-yl)-3,6-dihydropyridin-1(2H)-yl]propan-1-one O-methyloxime;

(1E)-1-(4-chlorophenyl)-2-[4-(1,3-thiazol-2-yl)-3,6-dihydropyridin-1(2H)-yl]ethanone O-methyloxime;

(1Z)-1-(4-chlorophenyl)-2-[4-(1,3-thiazol-2-yl)-3,6-dihydropyridin-1(2H)-yl]ethanone O-methyloxime;

(1E)-1-(4-chlorophenyl)-3-(3-methyl-3',6'-dihydro-2,4'-bipyridin-1'(2'H)-yl)propan-1-one O-methyloxime; and

(1Z)-1-(4-chlorophenyl)-3-(3-methyl-3',6'-dihydro-2,4'-bipyridin-1'(2'H)-yl)propan-1-one O-methyloxime.

15. (Cancelled) The compound according to claim 2 wherein

X is O;

R_2 is aryl;

Z is CH;

--- is absent; and

R_4 is heteroaryl.

16. (Cancelled) The compound according to claim 2 wherein

X is O;

R_2 is aryl wherein the aryl is selected from the group consisting of naphthyl and phenyl wherein the phenyl is substituted with 0, 1, or 2 substituents independently selected from the group consisting of alkyl, cyano, and halogen;

Z is CH;

--- is absent; and

R_4 is heteroaryl wherein the heteroaryl is selected from the group consisting of pyrazin-2-yl, 3-cyanopyridin-2-yl, 5-hydroxypyridin-2-yl, 3-methylpyridin-2-yl, pyridin-2-yl, 2-pyridinium N-oxide, pyrimidin-2-yl, and thiazol-2-yl.

17. (Cancelled) The compound according to claim 16 selected from the group consisting of

(1E)-1-(4-chlorophenyl)-3-(4-pyridin-2-ylpiperidin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(4-chlorophenyl)-3-(4-pyridin-2-ylpiperidin-1-yl)propan-1-one O-methyloxime;

2-{1-[(3E)-3-(4-chlorophenyl)-3-(methoxyimino)propyl]piperidin-4-yl}pyridinium N-oxide;

2-{1-[(3Z)-3-(4-chlorophenyl)-3-(methoxyimino)propyl]piperidin-4-yl}pyridinium N-oxide;

2-{1-[(2E)-2-(4-fluorophenyl)-2-(methoxyimino)ethyl]piperidin-4-yl}pyridinium N-oxide; and

2-{1-[(2Z)-2-(4-fluorophenyl)-2-(methoxyimino)ethyl]piperidin-4-yl}pyridinium N-oxide.

18. (Currently Amended) The compound according to claim 1 wherein

X is NR_A; ~~and~~**and**

R_2 is aryl.~~;~~

19. (Previously Presented) The compound according to claim 18 wherein

R_2 is aryl wherein the aryl is selected from the group consisting of naphthyl and phenyl wherein the phenyl is substituted with 0, 1, or 2 substituents independently selected from the group consisting of alkyl, cyano, and halogen.

20. (Previously Presented) The compound according to claim 1 that is 1-(4-fluorophenyl)-2-(4-pyridin-2-ylpiperazin-1-yl)ethanone methylhydrazone.

21. (Cancelled) The compound according to claim 2 wherein

X is NR_A;

R_2 is aryl;

Z is CH;

--- is absent; and

R_4 is heteroaryl.

22. (Cancelled) The compound according to claim 2 wherein

X is NR_A;

R_2 is aryl wherein the aryl is selected from the group consisting of naphthyl and phenyl wherein the phenyl is substituted with 0, 1, or 2 substituents independently selected from the group consisting of alkyl, cyano, and halogen;

Z is CH;

--- is absent; and

R_4 is heteroaryl wherein the heteroaryl is selected from the group consisting of pyrazin-2-yl, 3-cyanopyridin-2-yl, 5-hydroxypyridin-2-yl, 3-methylpyridin-2-yl, pyridin-2-yl, 2-pyridinium N-oxide, pyrimidin-2-yl, and thiazol-2-yl.

23. (Cancelled) The compound according to claim 22 that is 1-(4-fluorophenyl)-2-(4-pyridin-2-ylpiperidin-1-yl)ethanone methylhydrazone.

24. (Cancelled) The compound according to claim 1 wherein R_3 is

25. (Cancelled) The compound according to claim 24 wherein

R_2 is aryl; and

R_4 is heteroaryl.

26. (Cancelled) The compound according to claim 24 wherein

R_2 is aryl wherein the aryl is selected from the group consisting of naphthyl and phenyl wherein the phenyl is substituted with 0, 1, or 2 substituents independently selected from the group consisting of alkyl, cyano, and halogen; and

R_4 is heteroaryl wherein the heteroaryl is selected from the group consisting of pyrazin-2-yl, 3-cyanopyridin-2-yl, 5-hydroxypyridin-2-yl, 3-methylpyridin-2-yl, pyridin-2-yl, 2-pyridinium N-oxide, pyrimidin-2-yl, and thiazol-2-yl.

27. (Cancelled) The compound according to claim 26 selected from the group consisting of

1-(4-fluorophenyl)-3-[3-(1,3-thiazol-2-yl)piperidin-1-yl]propan-1-one O-methyloxime;

1-(4-fluorophenyl)-3-[3-(1,3-thiazol-2-yl)piperidin-1-yl]propan-1-one O-ethyloxime;

1-(4-fluorophenyl)-3-(3-pyridin-2-ylpiperidin-1-yl)propan-1-one O-methyloxime;

1-(4-chlorophenyl)-3-(3-pyridin-2-ylpiperidin-1-yl)propan-1-one O-methyloxime;

(1E)-1-(4-chlorophenyl)-3-[3-(1,3-thiazol-2-yl)piperidin-1-yl]propan-1-one O-methyloxime;

(1Z)-1-(4-chlorophenyl)-3-[3-(1,3-thiazol-2-yl)piperidin-1-yl]propan-1-one O-methyloxime;

2-{1-[2-(4-fluorophenyl)-2-(methoxyimino)ethyl]piperidin-3-ylpyridinium N-oxide; and

2-{1-[3-(4-fluorophenyl)-3-(methoxyimino)propyl]piperidin-3-yl}pyridinium N-oxide.

28. (Cancelled) The compound according to claim 1 wherein R_3 is

29. (Cancelled) The compound according to claim 28 wherein

R_2 is aryl; and

R_4 is heteroaryl.

30. (Cancelled) The compound according to claim 28 wherein

R_2 is aryl wherein the aryl is selected from the group consisting of naphthyl and phenyl wherein the phenyl is substituted with 0, 1, or 2 substituents independently selected from the group consisting of alkyl, cyano, and halogen; and

R_4 is heteroaryl wherein the heteroaryl is selected from the group consisting of pyrazin-2-yl, 3-cyanopyridin-2-yl, 5-hydroxypyridin-2-yl, 3-methylpyridin-2-yl, pyridin-2-yl, 2-pyridinium N-oxide, pyrimidin-2-yl, and thiazol-2-yl.

31. (Cancelled) The compound according to claim 30 selected from the group consisting of

(1E)-1-(4-fluorophenyl)-3-(3-pyrazin-2-ylpyrrolidin-1-yl)propan-1-one O-methyloxime;

(1Z)-1-(4-fluorophenyl)-3-(3-pyrazin-2-ylpyrrolidin-1-yl)propan-1-one O-methyloxime;

(1E)-1-(4-fluorophenyl)-2-(3-pyrazin-2-ylpyrrolidin-1-yl)ethanone O-methyloxime;

(1Z)-1-(4-fluorophenyl)-2-(3-pyrazin-2-ylpyrrolidin-1-yl)ethanone O-methyloxime;

(1E)-1-(4-fluorophenyl)-3-(3-pyrazin-2-ylpyrrolidin-1-yl)propan-1-one oxime;

(1Z)-1-(4-fluorophenyl)-3-(3-pyrazin-2-ylpyrrolidin-1-yl)propan-1-one oxime; and

(1Z)-1-(4-fluorophenyl)-2-(3-pyrazin-2-ylpyrrolidin-1-yl)ethanone oxime.

32. (Previously Presented) A pharmaceutical composition comprising a therapeutically effective amount of a compound of formula (I) according to claim 1 in combination with a pharmaceutically acceptable carrier.

33. (Currently Amended) A method of treating **male** sexual dysfunction in a mammal comprising administering to the mammal a therapeutically effective amount of a

compound of formula (I) according to claim 1 or a pharmaceutically acceptable salt thereof in combination with a pharmaceutically acceptable carrier.

34. (Withdrawn) A method of treating sexual dysfunction in a mammal comprising administering to the mammal a therapeutically effective amount of a compound of formula (I) according to claim 1 or a pharmaceutically acceptable salt thereof in combination with a phosphodiesterase 5 inhibitor.

35. (Withdrawn) A method of treating sexual dysfunction in a mammal comprising administering to the mammal a therapeutically effective amount of a compound of formula (I) according to claim 1 or a pharmaceutically acceptable salt thereof in combination with an adrenergic receptor antagonist.

36. (Withdrawn) A method of treating sexual dysfunction in a mammal comprising administering to the mammal a therapeutically effective amount of a compound of formula (I) according to claim 1 or a pharmaceutically acceptable salt thereof in combination with a dopamine agonist.

37. (Previously Presented) A method of treating male erectile dysfunction in a mammal comprising administering to the mammal in need of such treatment a therapeutically effective amount of a compound of formula (I) according to claim 1 or a pharmaceutically acceptable salt thereof.

38. (Withdrawn) A method of treating female sexual dysfunction in a mammal comprising administering to the mammal in need of such treatment a therapeutically effective amount of a compound of formula (I) according to claim 1 or a pharmaceutically acceptable salt thereof.

39. (Cancelled) A method of treating cardiovascular disorders, inflammatory disorders, attention deficit hyperactivity disorder, Alzheimer's disease, drug abuse, Parkinson's disease, schizophrenia, anxiety, mood disorders or depression in a mammal

comprising administering to the mammal in need of such treatment a therapeutically effective amount of a compound of formula (I) or a pharmaceutically acceptable salt or prodrug thereof.

40. (Cancelled)A method of treating sexual dysfunction in a mammal comprising administering to the mammal a therapeutically effective amount of a compound of formula (Ia)

(Ia)

or a pharmaceutically acceptable salt ~~or prodrug~~ thereof, wherein

X is selected from the group consisting of O and NR_A;

R_A is selected from the group consisting of hydrogen and alkyl;

R_1 is selected from the group consisting of hydrogen, alkenyl, alkoxyalkyl, alkyl, alkynyl, arylalkyl, cyanoalkyl, cycloalkyl, haloalkyl, and hydroxyalkyl;

R_2 is selected from the group consisting of aryl, arylalkyl, heteroaryl, and heteroarylalkyl; wherein the heteroaryl and the heteroaryl moiety of the heteroarylalkyl are mocyclic, five or six membered rings containing 1, 2, 3, or 4 heteroatoms independently selected from the group consisting of N, O, and S;

R_3 is

;

R_4 is heteroaryl; wherein the heteroaryl is a monocyclic, five or six membered ring containing 1, 2, 3, or 4 heteroatoms independently selected from the group consisting of N, O, and S;

L is alkylene substituted with 0 or 1 substituent selected from the group consisting of alkoxy, alkoxyamino, hydroxy, and hydroxyiminoaryl;

R_B is alkyl;

Z is N; and

--- is absent or a pharmaceutically acceptable salt ~~or prodrug~~ thereof in combination with a pharmaceutically acceptable carrier.

41. (Cancelled) The method according to claim 40 wherein R_3 is

42. (Cancelled) The method according to claim 40 wherein

X is O;

R_2 is aryl;

and

R_4 is heteroaryl.

43. (Cancelled) The method according to claim 40 wherein

X is O;

R_2 is aryl wherein the aryl is selected from the group consisting of naphthyl and phenyl wherein the phenyl is substituted with 0, 1, or 2 substituents independently selected from the group consisting of alkyl, cyano, and halogen;

and

R_4 is heteroaryl wherein the heteroaryl is selected from the group consisting of pyrazin-2-yl, 3-cyanopyridin-2-yl, 5-hydroxypyridin-2-yl, 3-methylpyridin-2-yl, pyridin-2-yl, 2-pyridinium N-oxide, pyrimidin-2-yl, and thiazol-2-yl.

44. (Cancelled) The method according to claim 43 where the compound of formula (Ia) is selected from the group consisting of

(1E)-1-(4-fluorophenyl)-4-(4-pyridin-2ylpiperazin-1-yl)butan-1-one oxime;

(1Z)-1-(4-fluorophenyl)-4-(4-pyridin-2ylpiperazin-1-yl)butan-1-one oxime;

(1E)-1-(4-fluorophenyl)-4-(4-pyridin-2ylpiperazin-1-yl)butan-1-one methyloxime; and

(1E)-1-(4-fluorophenyl)-4-(4-pyridin-2ylpiperazin-1-yl)butan-1-one methyloxime.

45. (Cancelled) The method according to claim 40 wherein

X is O;

R_2 is arylalkyl;

and

R_4 is heteroaryl.

46. (Cancelled) The method according to claim 40 wherein

X is O;

R_2 is arylalkyl wherein the arylalkyl is benzyl;

and

R_4 is heteroaryl wherein the heteroaryl is selected from the group consisting of pyrazin-2-yl, 3-cyanopyridin-2-yl, 5-hydroxypyridin-2-yl, 3-methylpyridin-2-yl, pyridin-2-yl, 2-pyridinium N-oxide, pyrimidin-2-yl, and thiazol-2-yl.

47. (Cancelled) The method according to claim 40 wherein

X is O;

R_2 is heteroaryl;

and

R_4 is heteroaryl.

48. (Cancelled) The method according to claim 40 wherein

X is O;

R_2 is heteroaryl wherein the heteroaryl is pyridin-3-yl;

and

R_4 is heteroaryl wherein the heteroaryl is selected from the group consisting of pyrazin-2-yl, 3-cyanopyridin-2-yl, 5-hydroxypyridin-2-yl, 3-methylpyridin-2-yl, pyridin-2-yl, 2-pyridinium N-oxide, pyrimidin-2-yl, and thiazol-2-yl.

49. (Cancelled) The method according to claim 41 wherein

X is O;

R_2 is aryl;

Z is C;

--- is a single bond; and

R_4 is heteroaryl.

50. (Cancelled) The method according to claim 41 wherein

X is O;

R_2 is aryl wherein the aryl is selected from the group consisting of naphthyl and phenyl wherein the phenyl is substituted with 0, 1, or 2 substituents independently selected from the group consisting of alkyl, cyano, and halogen;

Z is C;

--- is a single bond; and

R_4 is heteroaryl wherein the heteroaryl is selected from the group consisting of pyrazin-2-yl, 3-cyanopyridin-2-yl, 5-hydroxypyridin-2-yl, 3-methylpyridin-2-yl, pyridin-2-yl, 2-pyridinium N-oxide, pyrimidin-2-yl, and thiazol-2-yl.

51. (Cancelled) The method according to claim 41 wherein

X is O;

R_2 is aryl;

Z is CH;

--- is absent; and

R_4 is heteroaryl.

52. (Cancelled) The method according to claim 41 wherein

X is O;

R_2 is aryl wherein the aryl is selected from the group consisting of naphthyl and phenyl wherein the phenyl is substituted with 0, 1, or 2 substituents independently selected from the group consisting of alkyl, cyano, and halogen;

Z is CH;

--- is absent; and

R_4 is heteroaryl wherein the heteroaryl is selected from the group consisting of pyrazin-2-yl, 3-cyanopyridin-2-yl, 5-hydroxypyridin-2-yl, 3-methylpyridin-2-yl, pyridin-2-yl, 2-pyridinium N-oxide, pyrimidin-2-yl, and thiazol-2-yl.

53. (Cancelled) The method according to claim 40 wherein

X is NR_A;

R_2 is aryl;

and

R_4 is heteroaryl.

54. (Cancelled) The method according to claim 40 wherein

X is NR_A;

R_2 is aryl wherein the aryl is selected from the group consisting of naphthyl and phenyl wherein the phenyl is substituted with 0, 1, or 2 substituents independently selected from the group consisting of alkyl, cyano, and halogen;

and

R_4 is heteroaryl wherein the heteroaryl is selected from the group consisting of pyrazin-2-yl, 3-cyanopyridin-2-yl, 5-hydroxypyridin-2-yl, 3-methylpyridin-2-yl, pyridin-2-yl, 2-pyridinium N-oxide, pyrimidin-2-yl, and thiazol-2-yl.

55. (Cancelled) The method according to claim 41 wherein

X is NR_A;

R_2 is aryl;

Z is CH;

--- is absent; and

R_4 is heteroaryl.

56. (Cancelled) The method according to claim 41 wherein

X is NR_A;

R_2 is aryl wherein the aryl is selected from the group consisting of naphthyl and phenyl wherein the phenyl is substituted with 0, 1, or 2 substituents independently selected from the group consisting of alkyl, cyano, and halogen;

Z is CH;

--- is absent; and

R_4 is heteroaryl wherein the heteroaryl is selected from the group consisting of pyrazin-2-yl, 3-cyanopyridin-2-yl, 5-hydroxypyridin-2-yl, 3-methylpyridin-2-yl, pyridin-2-yl, 2-pyridinium N-oxide, pyrimidin-2-yl, and thiazol-2-yl.

57. (Cancelled) The method according to claim 41 wherein R_3 is

58. (Cancelled) The method according to claim 57 wherein

R_2 is aryl; and

R_4 is heteroaryl.

59. (Cancelled) The method according to claim 57 wherein

R_2 is aryl wherein the aryl is selected from the group consisting of naphthyl and phenyl wherein the phenyl is substituted with 0, 1, or 2 substituents independently selected from the group consisting of alkyl, cyano, and halogen; and

R_4 is heteroaryl wherein the heteroaryl is selected from the group consisting of pyrazin-2-yl, 3-cyanopyridin-2-yl, 5-hydroxypyridin-2-yl, 3-methylpyridin-2-yl, pyridin-2-yl, 2-pyridinium N-oxide, pyrimidin-2-yl, and thiazol-2-yl.

60. (Cancelled) The method according to claim 40 wherein R_3 is

61. (Withdrawn) The method according to claim 60 wherein

R_2 is aryl; and

R_4 is heteroaryl.

62. (Withdrawn) The method according to claim 60 wherein

R_2 is aryl wherein the aryl is selected from the group consisting of naphthyl and phenyl wherein the phenyl is substituted with 0, 1, or 2 substituents independently selected from the group consisting of alkyl, cyano, and halogen; and

R_4 is heteroaryl wherein the heteroaryl is selected from the group consisting of pyrazin-2-yl, 3-cyanopyridin-2-yl, 5-hydroxypyridin-2-yl, 3-methylpyridin-2-yl, pyridin-2-yl, 2-pyridinium N-oxide, pyrimidin-2-yl, and thiazol-2-yl.

63. (Cancelled) A pharmaceutical composition comprising a therapeutically effective amount of a compound of formula (Ia)

(Ia)

or a pharmaceutically acceptable salt thereof, wherein

X is selected from the group consisting of O and NR_A;

R_A is selected from the group consisting of hydrogen and alkyl;

R_1 is selected from the group consisting of hydrogen, alkoxyalkyl, alkyl, alkynyl, arylalkyl, cyanoalkyl, cycloalkyl, haloalkyl, and hydroxyalkyl;

R_2 is selected from the group consisting of aryl, arylalkyl, heteroaryl, and heteroarylalkyl; wherein the heteroaryl and the heteroaryl moiety of the heteroarylalkyl are mocyclic, five or six membered rings containing 1, 2, 3, or 4 heteroatoms independently selected from the group consisting of N, O, and S;

R_3 is

;

R_4 is heteroaryl; wherein the heteroaryl is a monocyclic, five or six membered ring containing 1, 2, 3, or 4 heteroatoms independently selected from the group consisting of N, O, and S;

L is alkylene substituted with 0 or 1 substituent selected from the group consisting of alkoxy, alkoxyamino, hydroxy, and hydroxyiminoaryl;

R_B is alkyl;

Z is N; and

--- is absent;

in combination with a pharmaceutically acceptable carrier.

64. (Cancelled) A method of treating sexual dysfunction in a mammal comprising administering to the mammal a therapeutically effective amount of a compound of formula (I) or a pharmaceutically acceptable salt or prodrug thereof in combination with a pharmaceutically acceptable carrier.

65. (Cancelled) A method of treating sexual dysfunction in a mammal comprising administering to the mammal a therapeutically effective amount of a compound of formula (Ia) according to claim 40 or a pharmaceutically acceptable salt thereof in combination with a phosphodiesterase 5 inhibitor.

66. (Cancelled) A method of treating sexual dysfunction in a mammal comprising administering to the mammal a therapeutically effective amount of a compound of formula (Ia) according to claim 40 or a pharmaceutically acceptable salt thereof in combination with an adrenergic receptor antagonist.

67. (Cancelled) A method of treating sexual dysfunction in a mammal comprising administering to the mammal a therapeutically effective amount of a compound of formula (Ia) according to claim 40 or a pharmaceutically acceptable salt thereof in combination with a dopamine agonist.

68. (Cancelled) A method of treating male erectile dysfunction in a mammal comprising administering to the mammal in need of such treatment a therapeutically effective amount of a compound of formula (Ia) according to claim 40 or a pharmaceutically acceptable salt thereof.

69. (Cancelled) A method of treating female sexual dysfunction in a mammal comprising administering to the mammal in need of such treatment a therapeutically effective amount of a compound of formula (Ia) according to claim 40 or a pharmaceutically acceptable salt thereof.

70. (Cancelled) A method of treating cardiovascular disorders, attention deficit hyperactivity disorder, Alzheimer's disease, drug abuse, Parkinson's disease, schizophrenia, anxiety, mood disorders or depression in a mammal comprising administering to the mammal in need of such treatment a therapeutically effective amount of a compound of formula (Ia) or a pharmaceutically acceptable salt or prodrug thereof.

71. (Cancelled) A compound of formula (II)

(II)

or a pharmaceutically acceptable salt or prodrug thereof, wherein

X is selected from the group consisting of O and NR_A;

R_A is selected from the group consisting of hydrogen and alkyl;

R_1 is selected from the group consisting of hydrogen, alkenyl, alkoxyalkyl, alkyl, alkynyl, arylalkyl, cyanoalkyl, cycloalkyl, haloalkyl, and hydroxyalkyl;

R_2 is selected from the group consisting of aryl, arylalkyl, heteroaryl, and heteroarylalkyl;

R_3 is selected from the group consisting of


, and

;

R_4 is aryl;

L is alkylene substituted with 0 or 1 substituent selected from the group consisting of alkoxy, alkoxyamino, hydroxy, and hydroxyiminoaryl; and

R_B is selected from the group consisting of hydrogen and alkyl.

72. (Cancelled) The compound according to claim 70 wherein R_3 is


.

73. (Cancelled) The compound according to claim 72 wherein

R_2 is aryl; and

R_4 is aryl.

74. (Cancelled) The compound according to claim 72 wherein

R_2 is aryl wherein the aryl is selected from the group consisting of naphthyl and phenyl wherein the phenyl is substituted with 0, 1, or 2 substituents independently selected from the group consisting of alkyl, cyano, and halogen; and

R_4 is aryl wherein the aryl is phenyl substituted with 0 or 1 substituent selected from the group consisting of alkoxy, cyano, and haloalkyl.

75. (Cancelled) The compound according to claim 74 selected from the group consisting of

(1E)-1-(4-fluorophenyl)-3-{3-[3-(trifluoromethyl)phenyl]pyrrolidin-1-yl}propan-1-one O-methyloxime;

(1Z)-1-(4-fluorophenyl)-3-{3-[3-(trifluoromethyl)phenyl]pyrrolidin-1-yl}propan-1-one O-methyloxime;

1-(4-fluorophenyl)-3-[3-(2-methoxyphenyl)pyrrolidin-1-yl]propan-1-one O-methyloxime;

(1E)-1-(4-fluorophenyl)-3-[3-(3-methoxyphenyl)pyrrolidin-1-yl]propan-1-one O-methyloxime;

(1Z)-1-(4-fluorophenyl)-3-[3-(3-methoxyphenyl)pyrrolidin-1-yl]propan-1-one O-methyloxime;

(1E)-1-(4-fluorophenyl)-3-[3-(4-methoxyphenyl)pyrrolidin-1-yl]propan-1-one O-methyloxime; and

(1Z)-1-(4-fluorophenyl)-3-[3-(4-methoxyphenyl)pyrrolidin-1-yl]propan-1-one O-methyloxime.

76. (Cancelled) The compound according to claim 70 wherein R_3 is

77. (Cancelled) The compound according to claim 76 wherein

R_2 is aryl; and

R_4 is aryl.

78. (Cancelled) The compound according to claim 76 wherein

R_2 is aryl wherein the aryl is selected from the group consisting of naphthyl and phenyl wherein the phenyl is substituted with 0, 1, or 2 substituents independently selected from the group consisting of alkyl, cyano, and halogen; and

R_4 is aryl wherein the aryl is phenyl substituted with 0 or 1 substituent selected from the group consisting of alkoxy, cyano, and haloalkyl.

79. (Cancelled) The compound according to claim 78 selected from the group consisting of

1-(4-fluorophenyl)-3-(3-phenylpiperidin-1-yl)propan-1-one O-methyloxime;

1-phenyl-3-(3-phenylpiperidin-1-yl)propan-1-one O-methyloxime; and

1-(4-chlorophenyl)-3-(3-phenylpiperidin-1-yl)propan-1-one O-methyloxime.

80. (Cancelled) A pharmaceutical composition comprising a therapeutically effective amount of a compound of formula (II) in combination with a pharmaceutically acceptable carrier.

81. (Cancelled) A method of treating sexual dysfunction in a mammal comprising administering to the mammal a therapeutically effective amount of a compound of formula (II) or a pharmaceutically acceptable salt or prodrug thereof in combination with a pharmaceutically acceptable carrier.

82. (Cancelled) A method of treating sexual dysfunction in a mammal comprising administering to the mammal a therapeutically effective amount of a compound of formula (II) or a pharmaceutically acceptable salt or prodrug thereof in combination with a phosphodiesterase 5 inhibitor.

83. (Cancelled) A method of treating sexual dysfunction in a mammal comprising administering to the mammal a therapeutically effective amount of a compound of formula (II) or a pharmaceutically acceptable salt or prodrug thereof in combination with an adrenergic receptor antagonist.

84. (Cancelled) A method of treating sexual dysfunction in a mammal comprising administering to the mammal a therapeutically effective amount of a compound of formula (II) or a pharmaceutically acceptable salt or prodrug thereof in combination with a dopamine agonist.

85. (Cancelled) A method of treating male erectile dysfunction in a mammal comprising administering to the mammal in need of such treatment a therapeutically effective amount of a compound of formula (II) or a pharmaceutically acceptable salt or prodrug thereof.

86. (Cancelled) A method of treating female sexual dysfunction in a mammal comprising administering to the mammal in need of such treatment a therapeutically effective amount of a compound of formula (II) or a pharmaceutically acceptable salt or prodrug thereof.

87. (Cancelled) A method of treating cardiovascular disorders, attention deficit hyperactivity disorder, Alzheimer's disease, drug abuse, Parkinson's disease, schizophrenia, anxiety, mood disorders or depression in a mammal comprising administering to the mammal in need of such treatment a therapeutically effective amount of a compound of formula (II) or a pharmaceutically acceptable salt or prodrug thereof.

88. (Cancelled) A method of treating sexual dysfunction in a mammal comprising administering to said mammal in need of such treatment a therapeutically effective amount of a compound of formula (III)

(III)

or a pharmaceutically acceptable salt or prodrug thereof, wherein

X is selected from the group consisting of O and NR_A;

R_A is selected from the group consisting of hydrogen and alkyl;

R_1 is selected from the group consisting of hydrogen, alkenyl, alkoxyalkyl, alkyl, alkynyl, arylalkyl, cyanoalkyl, cycloalkyl, haloalkyl, and hydroxyalkyl;

R_2 is selected from the group consisting of aryl, arylalkyl, heteroaryl, and heteroarylalkyl;

R_3 is

R_4 is aryl;

L is alkylene substituted with 0 or 1 substituent selected from the group consisting of alkoxy, alkoxyamino, hydroxy, and hydroxyiminoaryl;

R_B is selected from the group consisting of hydrogen and alkyl;

Z is selected from the group consisting of C and CH; and

--- is absent or a single bond provided that when Z is C then --- is a single bond.

89. (Cancelled) A pharmaceutical composition comprising a therapeutically effective amount of a compound of formula (III) in combination with a pharmaceutically acceptable carrier.

90. (Cancelled) A method of treating sexual dysfunction in a mammal comprising administering to the mammal a therapeutically effective amount of a compound of formula (III) or a pharmaceutically acceptable salt or prodrug thereof in combination with a pharmaceutically acceptable carrier.

91. (Cancelled) A method of treating sexual dysfunction in a mammal comprising administering to the mammal a therapeutically effective amount of a compound of formula (III) or a pharmaceutically acceptable salt or prodrug thereof in combination with a phosphodiesterase 5 inhibitor.

92. (Cancelled) A method of treating sexual dysfunction in a mammal comprising administering to the mammal a therapeutically effective amount of a compound of formula (III) or a pharmaceutically acceptable salt or prodrug thereof in combination with an adrenergic receptor antagonist.

93. (Cancelled) A method of treating sexual dysfunction in a mammal comprising administering to the mammal a therapeutically effective amount of a compound of formula (III) or a pharmaceutically acceptable salt or prodrug thereof in combination with a dopamine agonist.

94. (Cancelled) A method of treating male erectile dysfunction in a mammal comprising administering to the mammal in need of such treatment a therapeutically effective amount of a compound of formula (III) or a pharmaceutically acceptable salt or prodrug thereof.

95. (Cancelled) A method of treating female sexual dysfunction in a mammal comprising administering to the mammal in need of such treatment a therapeutically effective amount of a compound of formula (III) or a pharmaceutically acceptable salt or prodrug thereof.

96. (Cancelled) A method of treating cardiovascular disorders, inflammatory disorders, attention deficit hyperactivity disorder, Alzheimer's disease, drug abuse, Parkinson's disease, schizophrenia, anxiety, mood disorders or depression in a mammal comprising administering to the mammal in need of such treatment a therapeutically effective amount of a compound of formula (III) or a pharmaceutically acceptable salt or prodrug thereof.